

DOCUMENT RESUME

ED 319 592

SE 051 401

AUTHOR Stevenson, Harold W.; And Others
TITLE Making the Grade in Mathematics: Elementary School Mathematics in the United States, Taiwan, and Japan.
INSTITUTION National Council of Teachers of Mathematics, Inc., Reston, Va.
REPORT NO ISBN-0-87353-292-9
PUB DATE 90
NOTE 38p.
AVAILABLE FROM National Council of Teachers of Mathematics, 1906 Association Drive, Reston, VA 22091 (\$9.50; 10 or more 20% discount).
PUB TYPE Reports - Research/Technical (143)
EDRS PRICE Document Not Available from EDRS.
DESCRIPTORS Classroom Communication; *Cross Cultural Studies; Elementary Education; *Elementary School Mathematics; Foreign Countries; *Mathematics Achievement; Mathematics Education; Mathematics Instruction; *Mathematics Teachers; *Parent Influence; Parent Participation; *Parent Student Relationship
IDENTIFIERS Japan; Taiwan

ABSTRACT

Over the last decade, it has been reported that American students lag behind their Asian counterparts as early as the first grade. This study investigated variables influencing elementary school students' mathematics achievement in Japan, Taiwan, and America. Children's mathematics achievement and cognitive abilities were tested. Children, teachers, and principals were interviewed about their reactions to school. Mathematics textbooks and mathematics instruction were analyzed. The following chapters are provided: (1) "The Problem"; (2) "The Study"; (3) "Cities"; (4) "Schools" (comparing organization, ranking, after-school classes, and homework); (5) "Textbooks" (discussing the differences in how the books are used); (6) "Achievement Tests" (comparing scores on computation and word problems); (7) "Cognitive Tests" (reporting no overall differences); (8) "Classroom Observations" (discussing time for mathematics, in-class behavior, and teaching); (9) "Attitudes about Mathematics"; (10) "Beliefs about Effort and Ability"; and (11) "Mothers and Homes." The following four recommendations to improve achievement of American children are offered: reorganize the school day; make mathematics exciting; get more assistance from parents; and change unhelpful assumptions. (YP)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
